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PURE MATH

ALGEBRA AND FUNCTION

Level & Board	EDEXCEL (A-LEVEL)
TOPIC:	DIFFERENTIATION
PAPER TYPE:	QUESTION PAPER - 4
TOTAL QUESTIONS	8
TOTAL MARKS	43

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Questions**Q1.**

A curve has equation

$$y = e^{2x} + \ln(x)$$

(a) Find, in simplest form, $\frac{dy}{dx}$ (3)

(b) Hence find the exact range of value of x for which the curve is increasing. (2)

(Total for question = 5 marks)

Q2.

A curve has equation

$$y = |x^2 - 4x + 3|$$

(a) Find, in simplest form, $\frac{dy}{dx}$ (3)

(b) Hence find the exact range of value of x for which the curve is increasing. (3)

(Total for question = 6 marks)

I am Sorry !!!!!

Q3.

A curve has equation

$$y = \frac{x^2 + 2x + 1}{\sqrt{x}}$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(2)

(b) Hence find the exact range of value of x for which the curve is increasing.

(3)

(Total for question = 5 marks)

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Q4.

A curve has equation

$$y = \ln|x^2 - 4|$$

(a) Find, in simplest form, $\frac{dy}{dx}$ **(3)**

(b) Hence find the exact range of value of x for which the curve is increasing.

(3)**(Total for question = 6 marks)****Q5.**

A curve has equation

$$y = \sin(x) + \ln(x)$$

(a) Find, in simplest form, $\frac{dy}{dx}$ **(2)**

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)**(Total for question = 4 marks)**

Q6.

A curve has equation

$$y = \sqrt{|x^2 - 4|}$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(4)

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)

(Total for question = 6 marks)

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Q7.

A curve has equation

$$y = x^3 + e^x$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(2)

(b) Hence find the exact range of value of x for which the curve is increasing.

(2)

(Total for question = 4 marks)

Q8.

A curve has equation

$$y = \sin(x) + x^2$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(4)

(b) Hence find the exact range of value of x for which the curve is increasing.

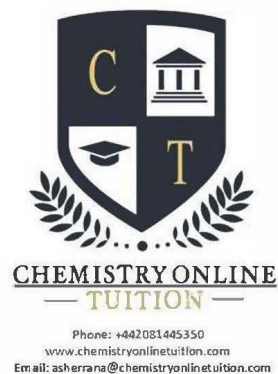
(3)

(Total for question = 7 marks)

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DR. ASHAR RANA



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